# DECISION
# AND
# FINDING OF NO SIGNIFICANT IMPACT
# FOR THE ENVIRONMENTAL ASSESSMENT:
# REDUCING BIRD DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM IN PENNSYLVANIA

## I. INTRODUCTION

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services program (WS) receives and responds to a variety of requests for assistance from individuals, organizations, and agencies experiencing damage and other problems related to wildlife. Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and is recognized as an integral part of wildlife management (The Wildlife Society 1992). In December 2004, WS released an Environmental Assessment (EA) "*Reducing Bird Damage through an Integrated Wildlife Damage Management Program in Pennsylvania*". Ordinarily individual WS damage management actions are categorically excluded and do not require an environmental assessment (EA) (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, in order to facilitate planning, interagency coordination, and the streamlining of program management, and to clearly communicate with the public the analysis of cumulative impacts from WS' proposed program, the EA on alternatives for managing bird damage in Pennsylvania was prepared. The EA documented the need for integrated bird damage management (IWDM) in Pennsylvania and assessed potential impacts of various alternatives to respond to bird damage and risks to human health and safety associated with bird activities. The EA and supporting documentation are available for review at the USDA-APHIS-WS State Office, P.O Box 60827 Harrisburg, PA 17106-0827. The EA incorporates by reference, information in the WS programmatic Environmental Impact Statement (EIS) (USDA 1997, Revised). Copies of the EIS are available from the USDA/APHIS/WS, Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737-1234.

The purpose of the proposed program is to reduce damage to property, agriculture, and natural resources and reduce risks to human health and safety resulting from the activities of American crow (*Corvus brachyrhynchos*), laughing gull (*Larus atricilla*), herring gull (*Larus argentatus*), ring-billed gull (*Larus delawarensis*), turkey vulture (*Cathartes aura*), black vulture (*Coragyps atratus*), mourning dove (*Zenaida macroura*), killdeer (*Charadrius vociferus*), eastern meadowlark (*Sturnella magna*), horned lark (*Eremophila alpestris*), northern mockingbird (*Mimus polyglottos*), gray catbird (*Dumetella carolinensis*), belted kingfisher (*Megaceryle alcyon*), double-crested cormorant (*Phalacrocorax auritus*), fish crow (*Corvus ossifragus*), great blue heron (*Ardea herodias*), bank swallow (*Riparia riparia*), barn swallow (*Hirundo rustica*), tree swallow (*Iridoprocne bicolor*), cliff swallow (*Petrochelidon* pyrrhonota), Northern rough-winged swallow (*Stelgidopteryx serripennis*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*Picoides villosus*), Northern flicker (*Colaptes auratus*), chimney swift (*Chaetura pelagica*), black-crowned night heron (*Nycticorax nycticorax*), American robin (*Turdus migratorius*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), barred owl (*Strix varia*), wild turkey (*Meleagris gallopavo*) and American coot (*Fulica Americana*) in Pennsylvania.

WS and the United States Fish and Wildlife Service (USFWS) cooperated in the production of this EA and consulted with the Pennsylvania Game Commission (PGC) and the Pennsylvania Department of Agriculture (PDA) to determine impacts on state wildlife populations and to ensure that the proposed

actions are in compliance with relevant laws, regulations, policies, orders and procedures. All WS IWDM activities will be conducted consistent with the Endangered Species Act of 1973 including consultation with the United States Department of Interior, Fish and Wildlife Service (USFWS), and all other applicable Federal, State and local laws, regulations and policies.

## II. BACKGROUND

The determination of a need for WS assistance with bird IWDM in Pennsylvania is based on bird damage to agricultural and natural resources, aquaculture, property, and risks to public health and safety. Some of the types of damage that resource owners/managers seek to alleviate are: property damage due to large flocks of roosting birds, crop damage from large flocks of birds in staging areas, predation of fish at aquaculture facilities, threats to threatened or endangered species or their habitats, threats to human health and safety; and hazards to aviation at airports. Details on the conflicts and benefits associated with birds in Pennsylvania are provided in the EA.

Pennsylvania Game Commission (Chapter 21, subchapter B, Section 2121) allows individuals to kill any game or wildlife: which the person may witness actually engaged in the material destruction of cultivated crops, fruit trees, vegetables, livestock, poultry or beehives; anywhere on the property under the person's control, immediately following such destruction; or where the presence of the game or wildlife on any cultivated lands or fruit orchards is just cause for reasonable apprehension of additional imminent destruction. Pennsylvania Game Commission (Chapter 147, Subchapter T. Section 147.721) states: General rule- A commercial wildlife pest control permit is required for a person to take, harass, transport, release or dispatch designated wildlife, for another person for a fee or other consideration, which is creating a nuisance, causing damage to property or is a risk to human health or safety. Pennsylvania Game Commission (Chapter 147, Subchapter U. Section 147.742) specifies that USFWS approval is needed in order to take a migratory bird in the State and notes the role of WS and the Commission in aiding landowners to obtain USFWS migratory bird permits.

The WS EA only evaluated alternatives for WS involvement in IWDM and cannot change U.S. Fish and Wildlife Service, Pennsylvania Game Commission or Pennsylvania Department of Agriculture permitting private landowners' access to lethal and non-lethal alternatives for managing bird damage. Therefore, a major overarching factor in determining how to analyze potential environmental impacts of WS' involvement in IWDM is that such management will likely be conducted by state, local government, or private entities that are not subject to compliance with NEPA if WS is not involved. This means that the Federal WS program has limited ability to affect the environmental outcome of IWDM in the Commonwealth, except that the WS program is likely to have lower risks to nontarget species and less impact on wildlife populations than some alternatives available to resource owners/managers. Therefore, WS has limited ability to affect the environmental *status quo*. Despite this limitation to federal decision-making, this EA process is valuable for informing the public and decision-makers of the substantive environmental issues and alternatives for management of bird damage.

## III. ISSUES ANALYZED IN THE EA

The following issues were identified as important to the scope of the analysis (40 CFR 1508.25) and each of the proposed alternatives was evaluated relative to its impacts on these issues.

- Effects on target bird species
- Effects on other wildlife species, including T&E species

- Effects on human health and safety
- Impacts to stakeholders, including aesthetics
- Humaneness and animal welfare concerns of methods used

An additional 4 issues were considered but were not evaluated in detail:

- No Wildlife Damage Management at Taxpayer Expense; Wildlife Damage Management should be Fee Based
- Bird Damage should be Managed by Private Nuisance Wildlife Control Agents
- Appropriateness of Preparing an EA (Instead of an EIS) for Such a Large Area
- Effectiveness of Bird Damage Management Methods

## IV. ALTERNATIVES ANALYZED IN DETAIL

The following alternatives were developed to analyze and respond to issues. Four additional alternatives were considered but not analyzed in detail. A detailed discussion of the effects of each Alternative on the issues is provided in the EA.

### Alternative 1 – Integrated Bird Damage Management Program

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) proposes to continue the current damage management program that responds to bird damage in the Commonwealth of Pennsylvania. An Integrated Wildlife Damage Management (IWDM) approach would be implemented to reduce bird damage to property, agricultural resources (including livestock), aquaculture, natural resources, and human health and safety. Damage management would be conducted on public and private property in Pennsylvania when the resource owner (property owner) or manager requests assistance. The IWDM strategy would encompass the use of practical and effective methods of preventing or reducing damage while minimizing harmful effects of damage management measures on humans, target and non-target species, and the environment. Under this action, WS could provide technical assistance and direct operational damage management, including non-lethal and lethal management methods by applying the WS Decision Model (Slate et al. 1992). When appropriate, physical exclusion, habitat modification or harassment would be recommended and utilized to reduce damage. Birds may also be removed as humanely as possible using shooting, trapping, and registered pesticides and other products. In determining the damage management strategy, preference would be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or could include instances where application of lethal methods alone would be the most appropriate strategy.

Bird damage management activities would be conducted in the State on private or public property, including airport facilities and adjacent or nearby properties, when requested and funded, and after an *Agreement for Control* or other comparable document has been completed. All management activities would comply with appropriate Federal, State, and Local laws, including applicable laws and regulations authorizing take of birds, and their nest and eggs.

Actions by property owner or manager

Property owners/managers requesting assistance would be provided with information regarding the use of effective and practical non-lethal and lethal techniques. Property owners/managers may choose to implement WS recommendations on their own, use contractual services of private businesses, use volunteer services of private organizations, use contractual services of Wildlife Services or take no action. Implementation of non-lethal methods such as habitat alteration, husbandry practices, harassment, scare devices, and mechanical repellents is usually the responsibility of the property owner or manager.

The property owner or manager may choose to apply for their own depredation permit from the USFWS to lethally take target birds, as required by the implementing regulations of the Migratory Bird Treaty Act (MBTA) for depredation control (50 CFR 21.41). Property owner/managers desiring a migratory bird depredation permit would need to consult with WS. WS would provide technical assistance on resolving the problem and complete a Migratory Bird Damage Report (WS Form 37) which includes information on the type and extent of the damages, the number of target birds present, and a recommendation for the number of target birds that should be taken to best alleviate the damages. The form and application are submitted to the PGC which either rejects the application or approves it and forwards it to the USFWS for review. The USFWS requires non-lethal methods be shown ineffective or impractical before the USFWS will issue a depredation permit.

Following USFWS review of a complete application for a depredation permit from a property owner or manager and the Migratory Bird Damage Report, a depredation permit could be issued to authorize the lethal take of a specified number of target birds as part of an IWDM approach. Upon receipt of a depredation permit, the property owner or manager or appropriate sub-permittee may commence the authorized activities and must submit a written report of their activities upon expiration of their permit. Permits may be renewed annually as needed to resolve damages. Property owners or managers with a permit could conduct BDM using any lethal or non-lethal methods that is legal. Permits are not required for the exclusive use of non-lethal BDM techniques. Not all of the methods listed in Appendix B of the EA as potentially available to WS would be legally available to property owners/managers. Currently, DRC-1339 and alpha-chloralose are only available for use by WS employees. Therefore, use of these chemicals by others would be illegal. However, the restricted use pesticide, Starlicide®, is similar to DRC-1339 and may be used by certified applicators. Avitrol® could also be used by state certified restricted-use pesticide applicators.

Actions by Wildlife Services

BDM by WS would be provided in Pennsylvania, when requested, on private property or public facilities where a need has been documented and upon completion of an *Agreement for Control* between WS and the property owner or manager. WS uses an IWDM approach were non-lethal or lethal methods are applied sequentially or simultaneously, depending on which methods are practical and effective for each site. Lethal methods used by WS may include shooting and live trapping followed by euthanasia. Non-lethal methods used or recommended by WS may include habitat alteration, husbandry practices, wire barriers and deterrents, tactile repellents, harassment, and scaring devices.

To address the anticipated needs of all property owners/managers with bird damage in Pennsylvania that may request WS assistance with lethal BDM methods, WS would submit an application for a one-year depredation permit to the PGC and USFWS estimating the maximum

number of birds of each species that might need to be lethally taken as part of an IWDM approach. The PGC and USFWS would conduct independent reviews of the application, and if acceptable, issue a permit as allowed under the depredation permit regulations. WS could request an amendment of their permit to increase the number of birds that would be taken to address unpredicted and emerging bird damages/conflicts. Each year, WS would submit an application for renewal of their permit. The number and species of birds on the permit would be reviewed and adjusted based upon management actions in the previous year and anticipated damages and conflicts in the next year (i.e., by using adaptive management principles). The USFWS would review these applications annually, and issue permits as allowed by regulations. All alterations in the number of birds to be taken will be checked against the impacts analyzed in this EA. All management actions by WS would comply with appropriate federal, state, and local laws.

**Alternative 2 – Non-lethal Bird Damage Management Only by WS**

This alternative would restrict WS to use or recommend only non-lethal BDM methods. Information on lethal BDM methods would still be available to producers and property owners through other sources such as PGC, USDA Agricultural Extension Service offices, universities, or pest control organizations. Requests for information regarding lethal management approaches would be referred to PGC, USFWS, local animal control agencies, or private businesses or organizations. Individuals might choose to implement WS non-lethal recommendations, implement lethal methods or other methods not recommended by WS, contract for WS' non-lethal direct control services, use contractual services of private businesses, or take no action. Persons receiving WS' non-lethal technical and direct control assistance could still resort to lethal methods that were available to them. Currently, DRC-1339 and alpha-chloralose are only available for use by WS employees. Therefore, use of these chemicals by others would be illegal. However, the restricted use pesticide, Starlicide®, is similar to DRC-1339 and may be used by certified applicators. Avitrol® could also be used by state certified restricted-use pesticide applicators.

Actions by property owner or manager

Property owners/managers requesting assistance from WS would only be provided with information regarding the use of effective and practical non-lethal methods. The non-lethal methods recommended by WS would follow those identified in Alternative 1 (Appendix B). Property owners/managers may choose to implement WS' non-lethal recommendations on their own, use contractual services of private businesses, use volunteer services of private organizations, use contractual services of WS for non-lethal methods, or take no action. In situations where non-lethal methods were impractical or ineffective to alleviate damages, WS would refer requests for information regarding lethal information to PGC, USFWS, local animal control agencies, or private businesses or organizations. Under this alternative, however, property owners/managers might be limited to using non-lethal methods only as they may have difficulty obtaining permits for lethal methods. The USFWS needs professional recommendations on individual damage situations before issuing a depredation permit for lethal methods, and the USFWS does not have the mandate or resources to conduct wildlife damage management work. State agencies with responsibilities for migratory birds would likely have to provide this information if depredation permits are to be issued. If the necessary information was provided by a source acceptable to the USFWS, permit issuance procedures would be identical to Alternative 1.

With an appropriate permit, property owners or managers could conduct BDM using any non-lethal or lethal method that is legally available. Property owners or managers might choose to

implement WS non-lethal recommendations, implement lethal methods on their own or with assistance from some private or public entity other than WS. Depending upon the level of experience of the individual conducting the bird damage management, there may be increased risks to target and nontarget species, the environment and human health and safety from the improper or less successful use of BDM methods. The USFWS and PGC might authorize more lethal take than is necessary to alleviate bird damages and conflicts because state agencies, businesses, and organizations have less technical knowledge and experience managing wildlife damage than WS.

Actions by Wildlife Services

BDM would be provided by WS in Pennsylvania, when requested, on private property or public facilities where a need has been documented and upon completion of an *Agreement for Control* between WS and the property owner or manager. This assistance would be limited to non-lethal methods. The non-lethal methods used or recommended by WS would be identical to those identified in Alternative 1. WS would not need to apply for a depredation permit from the USFWS.

**Alternative 3 – Technical Assistance Only**

This alternative would not allow for WS operational BDM in Pennsylvania. WS would only provide technical assistance and make recommendations when requested. Producers, property owners, agency personnel, corporations, or others could conduct BDM using any legal lethal or non-lethal method available to them. Currently, DRC-1339 and alpha-chloralose are only available for use by WS employees. Therefore, use of these chemicals by others would not occur legally. However, the restricted use pesticide, Starlicide®, is similar to DRC-1339 and may be used by certified applicators. Avitrol® could also be used by state certified restricted-use pesticide applicators.

Actions by property owners/managers

Property owners/managers requesting assistance from WS would only receive technical information regarding the used of effective and practical non-lethal and lethal BDM methods. The non-lethal and lethal methods recommended by WS would be identical to those identified in Alternative 1 with the exception of those methods which are exclusively available to WS. Property owners/managers may choose to implement WS' recommendations, use contractual services of private businesses, use volunteer services of private organizations, or take no action. In situations where non-lethal methods are ineffective or impractical, WS would advise the property owner or manager of appropriate lethal methods to supplement non-lethal methods. In order for the property owner or manager to use lethal methods, they must apply for their own depredation permit to take birds from the USFWS. The depredation permit process would be identical to Alternative 1. Following PGC and USFWS review of a complete application for a depredation permit from a property owner or manager and the Migratory Bird Damage Report, a depredation permit could be issued to authorize the lethal take of a specified number of target birds following the procedures identified in Alternative 1(under Property owner or manager).

Property owners or managers could conduct BDM using shooting or any non-lethal method that is legal. Alternative 1 and Appendix B of the EA describes a number of methods that could be employed by property owners or managers with or without receiving technical assistance advice from WS under this alternative. Depending upon the level of experience of the individual conducting the bird damage management, there may be increased risks to target and nontarget

species, the environment and human health and safety from the improper or less successful use of BDM methods. The availability of technical advice from WS may help to minimize these risks.

Actions by Wildlife Services

WS would only provide technical assistance and assist property owners/managers with Migratory Bird Depredation Reports required by the USFWS. WS would not provide operational assistance under this alternative.

**Alternative 4- No Federal WS Bird Damage Management**

This alternative would eliminate WS involvement in BDM in Pennsylvania. Property owners and managers would have to conduct their own BDM without WS input. Information on BDM methods would still be available to producers and property owners through other sources such as PGC, USDA Agricultural Extension Service offices, universities, or pest control organizations. Requests for information would be referred to PGC, FWS, local animal control agencies, or private businesses or organizations. Individuals might choose to conduct BDM themselves, use contractual services of private businesses, or take no action. DRC-1339 and alpha-chloralose are only available for use by WS employees. Therefore, use of these chemicals by private individuals would be illegal. However, the restricted use pesticide, Starlicide®, is similar to DRC-1339 and may be used by certified applicators. Avitrol® could also be used by state certified restricted-use pesticide applicators.

With an appropriate permit, property owners or managers could conduct BDM using shooting or any non-lethal method that is legally available to them. However, under this alternative property owners/managers may have difficulty obtaining permits to use lethal BDM methods. The USFWS needs professional recommendations on individual damage situations before issuing a depredation permit for lethal takes, and the USFWS does not have the mandate or the resources to conduct wildlife damage management work. State agencies with responsibilities for migratory birds would likely have to provide this information if depredation permits are to be issued. If the necessary information was provided by a source acceptable to the USFWS, permit issuance procedures would be identical to Alternative 1.

Depending upon the level of experience of the individual conducting the bird damage management, there may be increased risks to target and nontarget species, the environment and human health and safety from the improper or less successful use of BDM methods. This type of problem is more likely under this alternative than under alternatives 3 where WS would be able to provide technical advice. Appendix B of the EA describes a number of lethal and non-lethal methods available for use, not all of which are available to property owners or managers under this alternative.

## V. MONITORING

The Pennsylvania WS program will annually monitor the cumulative impacts of its actions relative to each of the issues analyzed in detail in the EA. This evaluation will include reporting the WS take of all target and nontarget species to help ensure no adverse impact on the viability of any target or non-target species including State and Federally listed threatened/endangered species. USFWS and PGC expertise will be used to assist in determining impacts on state wildlife populations.

## VI. PUBLIC INVOLVEMENT

As part of this process, and as required by the CEQ and APHIS-NEPA implementing regulations, an announcement of the availability of the EA for public review and comment was made through "Notices of Availability" (NOA) published in five major newspapers throughout the Commonwealth and through direct mailings to parties that had specifically requested to be notified. Sixteen (16) letters were mailed to organizations, individuals, and public agencies announcing that the EA was available. WS received 8 requests for copies of the EA for review. Following the 30 day public review and comment period for the EA, PA WS received 15 comments on the EA. All comments were considered in detail and reviewed for substantive and relevant issues. Documentation of a complete review of the comments received was provided to the decision maker for this EA. Some concerns raised in the comments received were already addressed in the EA or outside the scope of the analysis, but some of the comments indicated areas that warranted additional clarification or treatment. These comments and the WS response are available in Appendix A.

## VII. AGENCY AUTHORITIES

Under various acts of Congress, the Secretary of Agriculture is authorized to carry out wildlife control programs necessary to protect the Nation's agricultural and other resources. Among these are the Act of March 2, 1931, 46 Stat. 1468-69, 7 U.S.C. §§ 426-426b, as amended and Public Law No. 100-202, § 101(k), 101 Stat. 1329-331, 7 U.S.C. § 426c. Under the Act of March 2, 1931 and 7 U.S.C. § 426c, the Secretary of Agriculture may carry out these wildlife control programs alone, or may enter into cooperative agreements with States, local jurisdictions, individuals and public and private agencies whereby they may fund and assist in carrying out such programs. The Secretary has delegated the authority under both these Acts to APHIS. Within that agency, the authority resides with the Wildlife Services (WS) program.

The USFWS is responsible for managing and regulating take of bird species that are listed as migratory under the Migratory Bird Treaty Act (MBTA) and those that are listed as threatened or endangered under the Endangered Species Act (ESA).

The USFWS authority for action is based on the MBTA of 1918 (as amended), which implements treaties between the United States, Great Britain (for Canada), the United Mexican States, Japan, and the Soviet Union. Section 3 of this Act authorized the Secretary of Agriculture:

> *"From time to time, having due regard to the zones of temperature and distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of such birds, to determine when, to what extent, if at all, and by what means, it is compatible with the terms of the convention to allow hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any such bird, or any part, nest, or egg thereof, and to adopt suitable regulations permitting and governing the same, in accordance with such determinations, which regulations shall become effective when approved by the President."*

The authority of the Secretary of Agriculture, with respect to the Migratory Bird Treaty Act, was transferred to the Secretary of the Interior in 1939 pursuant to Reorganization Plan No. II. Section 4(f), 4 Fed. Reg. 2731, 53 Stat. 1433.

CFR 50 Subchapter C - The National Wildlife Refuge System - Part 30 - Feral Animals - Subpart B-30.11 - Control of feral animals states: (a) Feral animals, including horses, burros, cattle, swine, sheep, goats, reindeer, dogs, and cats, without ownership that have reverted to the wild from a domestic state may be

taken by authorized federal or state personnel or by private persons operating under permit in accordance with applicable provisions of federal or state law or regulation.

The PGC is charged by law 322 (a) Title 34 "to protect, propagate, manage, and preserve the game or wildlife of this Commonwealth and to enforce, by proper actions and proceedings, the law of this Commonwealth relating thereto."

## VIII. DECISION and RATIONALE

I have carefully reviewed the EA and the input resulting from the EA review process. I believe the issues identified in the EA are best addressed by selecting Alternative 1, *Integrated Bird Damage Management Program (Proposed Action/No Action)*, and applying the associated standard operating procedures and monitoring measures discussed in Chapter 3 of the EA. Alternative 1 provides the best range of damage management methods considered practical and effective, addresses the issues, and accomplishes WS' Congressionally directed role in protecting the Nation's agricultural and other resources. WS policies and social considerations, including humane issues, will be considered while conducting IWDM. While Alternative 1 does not require non-lethal methods to be used, WS will continue to provide information and encourage the use of practical and effective non-lethal methods (WS Directive 2.101).

The analyses in the EA demonstrate that Alternative 1 provides WS the best opportunity to address the issues and has low impacts on target and non-target species, provides safeguards for public safety, and allows WS to meet its obligations to the PGC, and cooperating counties and residents of Pennsylvania. Alternative 1 provides a mix of technical assistance, non-lethal and lethal methods. As a part of this Decision, the Pennsylvania WS program will provide information on biological and non-lethal management techniques that could reduce damage. I have also adopted the EA as final because comments from the public comments received did not change the analysis.

## FINDING OF NO SIGNIFICANT IMPACT

The EA indicates that there will not be significant impact, individually or cumulatively, on the quality of the human environment because of the proposed action, and that these actions do not constitute a major Federal action. I agree with this conclusion and therefore determine that an EIS will not be necessary or prepared. This determination is based on the following factors:

1. Bird damage management, as conducted in Pennsylvania is not regional or national in scope.

2. The proposed action will not have an impact on unique characteristics of the areas such as historical or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecological critical areas.

3. The proposed action will not significantly affect public health and safety.

4. The effects on the quality of the human environment are not highly controversial. Although there is opposition to WS damage management, this action is not controversial in relation to size, nature or effects.

5. Standard Operating Procedures adopted as part of the proposed action lessen risks to the public and prevent adverse effects on the human environment and reduce uncertainty and risks.

6. The proposed action does not establish a precedent for future actions with significant effects. This action would not set precedence for additional WS damage management that may be implemented or planned in Pennsylvania.

7. The number of animals taken (both target and non-target) by WS annually is small in comparison to the total population. Adverse effects on wildlife or wildlife habitats would be minimal.

8. No significant cumulative effects were identified by this assessment or other actions implemented or planned within the area.

9. Bird damage management would not affect cultural or historic resources. The proposed action does not affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause a loss or destruction of significant scientific, cultural, or historical resources.

10. An evaluation of the proposed action and its effects on State and Federally listed threatened and endangered species determined that no significant adverse effects would be created for these species. The proposed action will fully comply with the Endangered Species Act of 1973, as amended. Consultations with the USFWS and the PGC regarding potential risks to threatened and endangered species have been conducted and these agencies' input was used to develop Standard Operating Procedures for the proposed action.

11. This action would be in compliance with federal, State and local laws or requirements for damage management and environmental protection.

For additional information regarding this decision, please contact Jason Suckow, State Director, APHIS,WS, P.O. Box 60827 Harrisburg, PA 17106, or by phone @ 717-236-9451.

Rick D Owens — 3/17/05

Rick D. Owens
Acting Regional Director, USDA-APHIS-WS
Raleigh, North Carolina

Date

## APPENDIX A

## RESPONSE TO COMMENTS

This Appendix contains issues raised by the public during the comment period for this EA and WS' response to each of the issues. Comments from the public are numbered and are written in bold text. The WS response follows each comment and is written in standard text.

**1. Opposed to the use of toxicants. Lethal methods are cruel and inhumane.**

WS realizes that the death of any animal is unacceptable to many people and regrettable. WS continues to pursue efforts to improve non-lethal methods and the selectivity of our damage management methods, and maintains and funds the National Wildlife Research Center (NWRC) to develop such methods. Variability in public perceptions of what constitutes a humane or appropriate method is addressed in Sections 2.2.4, 2.2.5, 4.1.4 and 4.1.5.

**2. The killing of birds needs to stop entirely. Effective, environmentally sound, and humane solutions are available to resolve these conflicts between birds and people and should be used. Pennsylvania WS should use only non-lethal techniques to resolve bird damage like the NY WS program**

We realize that the death of any animal is unacceptable to many people and regrettable. WS continues to pursue efforts to improve non-lethal methods and the selectivity of our damage management methods, and maintains and funds the National Wildlife Research Center (NWRC) to develop such methods. Research, however, suggests that most animals adjust and habituate to non-lethal methods such as sounds or scare techniques and the methods soon become unsuccessful (Bomford and O'Brien 1990, Conover 2002). Despite extensive research, the efficacy of most non-lethal techniques remains unproven or inconsistent (Bomford and O'Brien 1990, Conover 2002). Further, success of a non-lethal program depends on where the relocated birds move because birds may also cause a problem at the new location. Only a limited number of bird repellents are currently registered by the U.S. Environmental Protection Agency or the PDA for the uses specified in this EA and, therefore, cannot be legally used or recommended by WS. Limiting bird damage management to non-lethal methods would not allow for a full range of integrated techniques to resolve damage management problems. We believe that implementation of only non-lethal methods would not allow WS the ability to address every damage situation in the most effective manner, especially in situations where expediency is required because of risks to public health and safety. For similar reasons, the NY WS program completed an environmental assessment and selected an alternative which involves the use of Integrated Wildlife Damage Management including the use of non-lethal and lethal BDM techniques on February 10, 2005 (USDA 2005*a*). Selection of an Integrated Wildlife Damage Management alternative that allows for the use of non-lethal and lethal wildlife damage management techniques does not change the fact that WS is committed to the use of non-lethal methods where practical and effective.

**3. WS' agreements never involve the use of humane responsible long-term non-lethal alternatives.**

This statement is incorrect. However, it is true that WS agreement forms do not accurately depict WS or cooperator use and recommendation of non-lethal and preventive techniques. WS' agreements only cover WS operational assistance. WS usually does not charge for technical assistance on non-lethal and preventive damage management techniques, so agreements are not completed for these types of activities. Many non-lethal and preventive techniques are employed by the landowner/resource manager. Most cooperators have exhausted their knowledge of how to address the problem before calling WS. It is not

unusual for WS to arrive at a damage site to find that the cooperator has already tried non-lethal strategies. In these situations, WS' assistance, as reflected in the agreement, may be to provide operational assistance with capture techniques and lethal tools that require specialized tools and training for safe and effective damage management.

**4. WS should be a leader in the use of the most current techniques for BDM. Commentor is concerned that WS may use or be aware of the most recent innovations in methods for preventing and reducing bird damage. EA fails to provide information on whether PA WS has used or recommended repellents like methyl anthranalate or anthraquinone and whether it is aware of recent advances in the use of non-lethal techniques including hazing on a regional scale as is done by WS in Mississippi and New York.**

WS uses trained, professional employees to conduct bird damage management programs in Pennsylvania and continues to train employees on newly developed and available techniques. The NWRC functions as the research arm of WS by providing scientific information and development of methods for wildlife damage management that are effective and environmentally responsible. NWRC scientists work closely with WS state programs, wildlife managers, researchers, and others to develop and evaluate wildlife damage management techniques.

The analysis in the EA is based on the best information and methods available, or that are being developed but not yet available. As mentioned numerous times, WS uses an integrated approach and the WS Decision Model to develop management strategies that alleviate damage in the most effective manner possible while minimizing the potentially harmful risks to humans, pets, non-target species and individuals. Section 3.2.4 and Appendix B of the EA discuss methods that are currently available including a detailed discussion of the bird repellent methyl anthranilate as well as products that may be considered should they become available at a future time (e.g., anthraquinone for species other than geese).

PA WS does use and recommend repellents like methyl anthranalate for various projects where appropriate. PA WS has also conducted many bird roost relocations using non-lethal techniques including; hazing, methyl anthranilate, lasers, and other non-lethal methods. The use of the laser is considered a new and current technique in reducing bird damage. The PA WS program was part of the initial testing phase of the laser demonstrating that the program in fact is a leader in the use of the most current technology for BDM.

**5. This EA fails to fully explain what procedures WS will use under either the proposed action or the other alternatives to evaluate damage.**

We disagree with this claim, as demonstrated by the analysis in the EA and WS' programmatic EIS (USDA 1997, Revised) to which the EA is tiered. The WS Decision Making process is a thought process for evaluating and responding to routine damage complaints similar to other professions (Section 3.2.3). WS' professionals evaluate the appropriateness of strategies and methods based on their availability (*i.e.*, legal and administrative) and on biological, economic, environmental and social considerations. Following this thought process, the methods deemed to be practical for the situation are developed into a management strategy and the results are documented in our Management Information System. The results are summarized and provided to the cooperating agencies to use for monitoring and evaluation purposes.

One commentor made reference to the WS Decision Model (Slate et al. 1992) as *"a one-page, seven-box, idealized diagram, not sufficient to describe this proposed action."* Slate et al. (1992) is a published article that is cited in the EA during discussion of the WS Decision Model. The article provides more

detail about the WS Decision Model and USDA (1997, Revised), to which the EA is tiered, provides detail and examples of how the model is used. In compliance with CEQ regulations, agencies are encouraged to tier their EAs to previously prepared EISs and to incorporate material by reference in order to reduce the volume of NEPA documents (40 CFR 1502.20, 40 CFR 1502.21). WS attempted to reach a balance between providing enough information for the public and decision makers and to also comply with CEQ regulations to reduce bulk and excessive paperwork (Eccleston 1995).

**6. EA does not provide data on the efficacy of lethal or non-lethal techniques. Need for action is based on the assumption that WS' damage management strategies benefit agricultural producers, property owners, natural resource managers and others.**

It is recognized that the most effective approach to resolving wildlife damage is to use an integrated approach which may call for the use of several damage management methods simultaneously or sequentially (USDA 1997, Revised). The purpose behind Integrated Wildlife Damage Management (IWDM) is to implement effective management methods in a cost-effective manner while minimizing the potentially harmful effects on humans, target and non-target species, and the environment[1]. Under the proposed alternative, the analysis showed that the methods proposed for use under an IWDM approach are the most effective and practical way to resolve damage problems. The efficacy of each alternative is based on the types of methods employed under that alternative. The efficacy of each method is based, in part, on the application of the method, the restriction on the use of the method(s), the skill of the personnel using the method and, for WS personnel, the guidance provided by WS Directives and policies. It is recognized that some methods may be more or less effective, or applicable depending on weather conditions, time of year, biological considerations, economic considerations, legal and administrative restrictions, the species responsible, magnitude of the damage, extent of damage, duration and frequency of the damage, prevention of future damage, presence of non-target species, or other factors. Because these various factors may preclude the use of certain methods, it is important to maintain the widest possible selection of damage management methods to most effectively resolve bird damage problems. Data and studies on the efficacy of specific damage management techniques are provided in Appendix B.

**7. Lethal control is not effective. Data is needed on efficacy and cost-effectiveness of the alternatives, especially the proposed action, and duration of control actions using different approaches.**

We disagree with this claim, and as referenced by commenter, Avery (2002) also cited studies where lethal damage management did reduce losses to crops (Elliott 1964, Larsen and Mott 1970, Palmer 1970, Plesser et al. 1983, Tahon 1980, Glahn et al. 2000 as cited in Avery 2002) and posed little danger to non-target species (Glahn et al. 2000). Avery (2002) also stated that it seems reasonable that local, short-term crop protection can be achieved through reduction in depredating bird populations, however, quantification of the relationship between the numbers of birds killed and the associated reduction in crop damage is lacking.

Further, perhaps a better way to state this is by asking the question, "Does the value of damage or the damage avoided equal or exceed the cost of providing bird damage management?" CEQ does not require a formal, monetized cost-benefit analysis to comply with NEPA (40 CFR 1508.14) and consideration of this issue is not essential to making a reasoned choice among the alternatives being considered. USDA (1997, Revised, Appendix L) states:

[1] The cost of management may sometimes be secondary because of overriding environmental, legal, human health and safety, animal welfare, or other concerns.

*"Cost effectiveness is not, nor should it be, the primary goal of the APHIS WS program. Additional constraints, such as the environmental protection, land management goals, and others, are considered whenever a request for assistance is received. These constraints increase the cost of the program while not necessarily increasing its effectiveness, yet they are a vital part of the APHIS WS Program."*

An analysis of cost-effectiveness in many bird damage management situations is difficult or impossible to determine because the value of benefits may not be readily calculable and personal perspectives differ about damage. For example, the potential benefit of eliminating pigeons from nesting in industrial buildings or starlings from a livestock facility could reduce incidences of illness among unknown numbers of building users or livestock. Since some bird-borne diseases are potentially fatal, or severely debilitating, the value of the benefit may be high. However, no studies of disease problems with and without bird damage management have been conducted[2], and, therefore, the number of cases prevented because of bird damage management are not possible to estimate. Also, it is rarely possible to conclusively prove that birds are responsible for individual disease cases or outbreaks. In addition, there are no studies available to assess the potential damage with and without bird damage management at airports. When a problem is identified at an airport and WS is requested to assist in reducing bird/aircraft strike risks, WS responds. Whether a damaging or fatal bird/aircraft strike would have occurred is speculative, however airport managers, the FAA and WS err on the side of reducing risks and potential bird strike damage.

Another example of the difficulty inherent in determining the cost-effectiveness of BDM is the management of some wildlife species to protect other wildlife species, such as Threatened and Endangered species. Civil values have been assigned for many common species of wildlife and can be used to calculate their value. However, in the case of Threatened and Endangered species, their value has been judged "incalculable" (Tennessee Valley Authority vs. Hill, US Supreme Court 1978), making it more difficult to specifically quantify the economic benefit to restore or protect Threatened and Endangered species.

**8. WS did not accurately characterize the potential for damage from birds in the EA.**

WS is a cooperatively funded, service-oriented program that only responds to damage situations after a request for assistance is received and an *Agreement for Control* is signed by the landowner/administrator or other comparable document is in place. WS also has the responsibility for responding to and attempting to reduce damage caused by migratory birds as specified in an MOU with the USFWS, FAA, and the PGC.

WS only conducts wildlife damage management activities on a request basis. While it is true that not all damage or potential damage problems exist in every part of Pennsylvania or in all situations, the potential remains and WS is authorized by Congress to resolve wildlife damage problems (Act of March 2, 1931, as amended). Funding for Pennsylvania WS comes from several sources including non-federal sources such as state funds, local government funding (county or city), and private funds. The protection of agricultural resources, property, and public health and safety will always be conducted by someone. A Federal WS program provides a service to the agricultural producers, protects property, natural resources, aquaculture, and public health and safety, in an environmentally, economically, and biologically sound program in the public interest.

[2] These questions and relationships are outside the scope of this EA and are more appropriate as research projects. We have used the best information available to prepare the analysis in the EA (40 CFR 1502.22).

**9. WS omitted an alternative that all feasible non-lethal methods be exhausted before turning to lethal control.**

This comment apparently suggests that WS does not consider non-lethal methods when devising a management strategy. This is far from the truth and all reasonable alternatives were evaluated in the EA. WS' proposed alternative, Adaptive Integrated Bird Damage Management, as outlined in the EA is similar to a non-lethal before lethal alternative because WS encourages and considers the use of non-lethal methods before lethal methods (WS Directive 2.101). Adding a non-lethal before lethal alternative and the associated analysis would not add additional information to the analysis for the public or decision maker. WS recognizes that the most effective approach to resolving wildlife damage is to use an integrated approach which may call for the use of several damage management methods (non-lethal and/or lethal) simultaneously or sequentially. If the requester is already using non-lethal methods or if the birds have habituated to scare tactics, repellents or loud noises, etc., WS would not consider continuing to implement those techniques because they have not proven effective. When evaluating methods for a damage situation, WS recognizes that some methods may be more or less effective, or applicable. See also Section 3.2.3.

**10. Wants WS to provide proof that non-lethal options have been tried first and found to be ineffective.**

This request would only be applicable to a mandatory non-lethal before lethal alternative. See Issue 9 above and Section 3.3.4 of the EA.

**11. Data in EA suggest that irritation with the presence of these birds is the primary reason for the call of their extermination. It is inappropriate to use lethal methods to resolve nuisance and aesthetic complaints. Only non-lethal methods should be used to address these types of problems.**

Differences in human values regarding what does and does not constitute an appropriate response to a wildlife conflict are addressed in the EA in sections 2.2.4, 2.2.5, 4.1.4 and 4.1.5. Pennsylvania WS is, and will continue to be, committed to resolving human-bird conflicts with non-lethal methods whenever practical and effective options are available. However, as discussed in the EA, experience indicates that non-lethal techniques may not be appropriate or effective in all situations. In some instances, use of non-lethal techniques does not actually resolve the damage problem; it just moves it to a different location.

**12. The EA overstates the potential harm from wild animals, in order to gain public acceptance. Sections on risks to human and livestock health and safety do not indicate that there is any risk of disease to the public in PA from the bird species covered in this EA.**

Specific examples of health and safety problems in Pennsylvania include employee illnesses caused by environmental contamination (droppings, leftover and wasted food material and bird feathers, etc) associated with ring-billed gulls nesting in and around a materials storage area that was confirmed and documented by the company's health and safety officer and a case of people contracting bird lice from nesting barn swallows that was documented by the PA the Pennsylvania Department of Heath.

The limited records of disease occurrence attributable to birds in Pennsylvania does not mean absence of risk but may only mean lack of reliable research in this area. Few studies are available on the occurrence and transmission of zoonotic diseases in wild birds. Study of this issue is complicated by the fact that some disease-causing agents associated with birds (e.g., Salmonella), may also be contracted from other sources. WS works with cooperators on a case-by-case basis to assess the nature and magnitude the wildlife conflict including providing information on the limitations about what we know regarding health

risks associated with large flocks and roosts of birds. It is the choice of the individual cooperator to tolerate the potential health risks or to seek to reduce those risks.

The goal of agricultural and human health programs is to prevent diseases/illness from occurring. Similarly agricultural biosecurity programs are designed to prevent diseases from occurring in the first place, and, in the instance that a disease outbreak occurs or a Foreign Animal Disease is detected, to prevent the spread of the disease. The presence of large numbers of wild birds that can and do move among multiple farms can be a risk to these biosecurity efforts (Clark and McLean 2003).

Papers like Hubálek (2004), which lists pathogenic organisms in migratory birds, provide an indication of the range of potential disease risks associated with wild birds. For most of these diseases, the risk of transmission from birds to humans is likely very low. The primary two human health issues related to the target species of this EA are Salmonella and Histoplasmosis.

Histoplasmosis is a fungal disease that affects the lungs which is caused by the organism *Histoplasma capsulatum*. The accumulated feces at bird roosts has long been known to be associated with the occurrence of the illness. In most instances of health risks associated with bird roosts, the roost has been in place for a period of years. The disease is generally contracted when the soil/feces below the roost is disturbed by wind on dry soil or human activity. As with many diseases, infants, young, the elderly and those with compromised immune systems are at the greatest risk of severe illness.

Salmonellosis is a well documented human and animal pathogen. In humans this organism most often results in "food poisoning" characterized by acute intestinal pain and diarrhea. Several types of the *Salmonella* bacteria are carried by wild birds with varying degrees of impact on humans and livestock. Friend (1999) reported relative rates of detection of *Salmonella* sp. in free ranging birds. *Salmonella* spp. isolates were frequent in gulls/terns and songbirds, common in herons/egrets, doves/pigeons, and infrequent in crows.

It is important to remember that when WS receives requests to relocate or remove flocks and roosts of birds, the reasons for the request are rarely attributable to one type of damage but usually include a combination of issues including damage to equipment and facilities from acids in fecal material; simple mechanical safety complaints (slippery work surfaces) from employees working in areas with accumulations of fecal material; costs associated with cleaning contaminated surfaces; aesthetic complaints related to noise, odor or mess; and concerns about potential disease transmission.

**12. Resource owners/managers should be required to tolerate a certain level of loss before receiving assistance. Resource owners/managers should be required to tolerate a certain level of loss before lethal control methods are used.**

WS is aware of concerns that federal bird damage management, especially the use of lethal damage management techniques, should not be allowed until economic losses become unacceptable. However, this type of policy would be inappropriate to apply to public health and safety situations. In addition, even though some losses can be expected and tolerated by agriculture producers and property owners, WS has the legal responsibility and direction to respond to requests for bird damage management, and it is program policy to aid each requester to minimize losses. Furthermore, in a ruling for Southern Utah Wilderness Alliance, et al. vs. Hugh Thompson, Forest Supervisor for the Dixie NF, et al., the court denied plaintiffs' motion for preliminary injunction. In part the court found that it was only necessary to show that damage from wildlife is threatened, to establish a need for wildlife damage management (U.S. District Court of Utah 1993). See also response to issues 1, 2, 11

**13. An action is not more or less humane because it is more or less technically feasible. WS must be clear about the fact that it is not using the most humane method possible for reasons of feasibility or cost effectiveness.**

WS does not contend that a technique is humane because it is more or less technically feasible. WS states that it seeks to use methods that cause the least amount of animal suffering within the constraints imposed by current technology and funding, while still providing sufficient damage management to resolve problems. Humaneness is addressed in the EA sections 2.2.5 and 4.1.5 and in the discussion of WS mitigation in standard operating procedures in EA Section 3.4.

**14. The EA fails to objectively analyze the issue of humaneness and it is the agency's responsibility to take this seriously.**

WS disagrees with your claim and takes the issue of humaneness of methods seriously (Section 2.2.5 and 4.1.5 in the EA) and WS continues to evaluate existing and new methods for animal welfare and humaneness concerns. WS' mission is to reduce bird damage, not bird populations and spends thousands of dollars each year to develop and bring to the field newly developed and more species specific and humane methods. Commenter stated that, "We note as well that unnecessary death is a significant issue in any proposed management action." WS couldn't agree more with that sentiment. While it is regrettable that wild animals die to alleviate damage in some situations, WS believes that if an animal death must occur, then it should occur with a minimum amount of distress and pain, in as short a period of time as practical, and with compassion. Commenter was apparently suggesting that only non-lethal methods should be used to protect resources from bird damage or potential damage. What if damage occurs in spite of the use of non-lethal methods? WS is trying to achieve a "balance" between the needs of people, recognizing that people are part of the environment, and animals while keeping issues like protection of the environment, economics, humaneness, etc. in perspective. Questions like, "Is it more humane to allow birds to fly across runways or inhabit livestock facilities, or to remove the birds and the hazards that exist?" need to be asked and answered. WS recognizes that animal welfare organizations are concerned that some methods used to manage wildlife damage may expose animals to pain and suffering. However, WS also recognizes another side to this issue, as perceived by traveling publics, airport managers, the livestock industry and others. WS believes that humaneness of an action or management plan must not only consider the effects of the action on the wildlife but also on the people or other species that may be or are affected by the wildlife. Ideally, such protection would be achieved through non-lethal means, but when non-lethal means are not practical or effective, lethal means may be the only way to accomplish such protection.

**15. The scope of the EA is too broad in terms of the bird species and the geographic region affected by the proposed action.**

WS believes the scope of the EA and impact to bird species from implementation of the proposed action were analyzed at a level appropriate for the proposed action. The bird species analyzed in the EA are the species where a request for services was received by WS and where WS experience in other areas suggests that problems may occur (Section 1.2 in the EA). The impact of management actions to reduce damage or potential damage was analyzed in Chapter 4. For species protected under the Migratory Bird Treaty Act, permits would need to be secured from the USFWS and PGC before lethal damage management actions could occur.

In addition, WS, PGC, and USFWS have conducted a number of studies and monitoring activities to assess bird populations and population trends for many species in Pennsylvania and throughout North America. The commentor may prefer that WS conduct separate analyses and prepare numerous EAs that evaluate the environmental impact of bird damage management however, WS has determined that

preparation of this EA to address bird damage management activities is appropriate. Pennsylvania WS only conducts bird damage management in a very small area of the State where damage is occurring or likely to occur. In terms of considering cumulative impacts, one EA covering the entire State provides a better analysis than multiple EAs covering smaller zones. In addition, the agency(ies) has the discretion to determine the geographic scope of their NEPA analyses (*Kleppe v Sierra Club,* 427 U.S. 390, 414 (1976), CEQ 1508.25) and WS has determined that the scope of this EA is appropriate (Section 1.8 and 2.3.3 in the EA). If in fact a determination was made that the proposed action would have a significant environmental impact, then WS would have prepared an EIS before actions were taken (40 CFR 1508.9).

WS' goal is to reduce bird damage, not bird populations. WS personnel use the Decision Model (Slate et al. 1992, USDA 1997, Revised) to develop the most appropriate strategy to reduce damages and detrimental environmental effects from damage management actions (Section 3.2.3 in the EA). When a request for assistance is received and after consultation with the requester, WS personnel evaluate the appropriateness of strategies, and methods are evaluated in the context of their availability (*i.e.,* legal and administrative) and suitability based on biological, environmental, economic and social considerations. As professional wildlife biologists, WS, PGC, and USFWS analyze the impacts to wildlife populations, and recognize that the damage situation may change at any time in any location; and that wildlife populations are dynamic, mobile and renewable. Site specific management strategies made using the Decision Model (Slate et al. 1992) are in accordance with plans, goals, and objectives of WS, USFWS, FAA and PGC and any minimization and standard operating procedures (SOP) described in the EA and adopted or established as part of the Decision.

Like other management organizations (*e.g.,* fire departments, emergency clean-up organizations, etc.), WS can sometimes predict the location and types of needs, damage and risks from historical records or past damage problems, and take action to prevent or reduce the damage. We cannot, however, always predict the exact locations or need to reduce wildlife damage at all locations and to do so would be highly speculative. This phenomenon would be like a fire department determining where the next fire occurs. WS can and does provide an analysis of impacts of their actions and impacts to reduce bird damage within the scope of the EA. The site-specificity problem occurs when trying to determine the exact location and animal(s) that is, or would be responsible for damages before the damage situation occurs. Preparing individual EAs for each project would be managerially impossible while still providing for public input during the NEPA process and would not allow WS to respond to requests nor deliver services in a timely manner.

In summary, WS has prepared an EA that provides information to address and predict the locations of potential bird damage management actions and coordinates efforts with USFWS and PGC as appropriate, to insure that protected bird populations remain healthy and viable. Thus, the EA addresses substantive environmental issues pertaining to bird damage management in Pennsylvania. WS can and does provide an analysis of affects of their actions to reduce bird damage within the scope of the EA. WS believes it meets the intent of NEPA and that this EA is the only practical way for WS to comply with NEPA and still be able to accomplish its mission, particularly under emergency situations. WS and the cooperating agencies determined that a more detailed analysis would not substantially improve the public's understanding of the proposal, the analysis, the decision-making process, and pursuing a more detailed analysis might even be considered inconsistent with NEPA's emphasis on reducing unnecessary paperwork (Eccleston 1995).

**16. Human activities, habitat limitations and limited food supplies, not predatory birds, are the real threat to game birds and Federally listed Threatened and Endangered species.**

WS concurs that interactions with native species are usually not the primary reason a species is Threatened or Endangered. However, for species with low densities and/or with degraded or limited

habitat, predation can be a limiting factor on the population. Specific examples of adverse impacts of some bird species on natural resources are provided in EA Section 1.3.7. WS would not conduct BDM activities to protect natural resources unless the agency or entity with management authority has sufficient information to prove that the target bird species is having an adverse impact on the resource in question. It should also be noted that WS may also conduct bird damage management for the protection of habitat as described in the EA and in Hebert (2005) for double-crested cormorants.

**17. There are greater impacts and threats to water quality and health and safety than the activities of birds.**

WS agrees. However, the existence of other threats to water quality and human health and safety does not preclude efforts to manage risks associated with birds. The decision to accept risks associated with bird activities and/or to allocate resources and efforts to managing other sources of impacts are the choice of the cooperator. Management of human sources of water pollution and risks from automobile accidents as references by the commentor are outside the authority of the WS program and the scope of this EA.

**18. Many bird damage problems could and should be addressed by managing human activities. WS should emphasize education and tolerance of wildlife.**

WS agrees that education and tolerance are an important part of an effective BDM program and these factors are discussed in the EA at Sections 3.2.2, 3.2.4 and Appendix B. Pennsylvania WS personnel provide information, demonstrations and advice on available bird damage management techniques. Technical assistance includes demonstrations on the proper use of some management devices (e.g., repellents, frightening devices, etc.) and information on animal husbandry, wildlife habits, habitat and facilities management and animal behavior modification. Technical assistance is generally provided following an on-site visit or verbal consultation with the requester. Typically, several management strategies are described to the requester for short and long-term solutions to damage problems; these strategies are based on the level of risk, need and practical application. Technical assistance may require substantial effort by WS personnel in the decision making process, but the actual implementation is the responsibility of the requester. Consultation with WS and the completion of a WS form 37 is required by the USFWS in order to issue a migratory bird permit for bird damage management. These consultations include WS providing technical assistance.

Education is an important element of WS' program activities because wildlife damage management is about finding "balance" or coexistence between the needs of people and needs of wildlife. This is extremely challenging as nature has no balance, but rather, is in continual flux. In addition to the routine dissemination of recommendations and information to individuals or organizations sustaining damage, lectures and demonstrations are provided to farmers, homeowners, and other interested groups. WS frequently cooperates with other agencies in education and public information efforts. Additionally, technical papers are presented at professional meetings and conferences so that WS personnel, other wildlife professionals, and the public are updated on recent developments in damage management technology, laws and regulations, and agency policies.

**19. It is impossible for WS to control/reduce wildlife populations sufficiently to alleviate damage. Compensatory birth and death rates will prevent WS actions from reducing bird populations and associated damage. Lethal techniques are only a short-term solution that leads to an endless cycle of killing**

The goal of the WS program is to reduce damage, risks, and conflicts with wildlife, not to manage or reduce wildlife populations. Localized population reduction efforts may be conducted at specific sites, but these efforts are not intended to or anticipated to result in reductions in the State, or overall

populations of these species (EA section 4.1.1). As stated in EA Section 4.1.1, WS recognize that local population reduction efforts are likely to be short-term and that new individuals may immigrate to the site or be born to animals remaining at the site. However, the ability of bird populations to sustain the proposed level of removal and to eventually return to treatment sites does not mean individual BDM actions are not successful in reducing damage, but that periodic bird damage management actions are necessary in many damage situations. This is true for most non-lethal damage management techniques as well as lethal damage management techniques. To say that a technique is ineffective because it must be repeated if new birds colonize the site is analogous to saying that lawn mowing is ineffective in making the grass short because it must be repeated.

Lethal methods are used in some of the examples to supplement or reinforce non-lethal methods that were ineffective or less effective than desired. Even though the reduction in local populations is not anticipated to last, timed properly, the local population can last long enough for the prey animals to be protected (e.g., eggs, lambs, chicks) to reach a size or level of maturity where they are at less risk of predation, it may also give cooperators time to implement preventive damage management methods like improvements to exclosures at hatchery sites or alterations to facility characteristics and local habitat intended to prevent the problem from occurring again.

**20. WS proposed a need for action outside its legal authority – specifically the EA states that one of the purposes to protect the "quality of life" of residents affected by bird roosts. This is an attempt to justify an action where no real damage exists.**

WS does not concur with this interpretation of the statement made in Section 1.3.1. WS is authorized by congress to reduce damage and health and safety risks caused by wildlife (the Act of March 2, 1931, as amended). Many types of wildlife damage, by their very nature, may be said to affect the quality of life of the individual experiencing the damage. The statement in EA section 1.3.1 refers to individuals perceiving the mess associated with droppings left by concentrations of birds is aesthetically displeasing, and resulting continual clean-up costs and effort as an adverse impact on their quality of life. Contracting an illness from a bird-related disease like histoplasmosis or salmonella or being injured or killed in an aircraft accident resulting from a bird-aircraft collision can also be interpreted as adverse impacts on the quality of life of the person involved

**21. Please provide examples of BDM methods.**

Examples of BDM methods available for use or recommendation by the Pennsylvania WS program are provided in the EA Section 3.2.2.1 and Appendix B. Additional examples are:

- Relocated of a large crow roost in Central Pennsylvania using only non-lethal methods. Some of the methods included; pyrotechnics, lasers, and spotlights.
- Destruction of barn swallow nests and eggs to reduce property damage from droppings and for human health and safety reasons.
- Relocation of turkey vulture roosts using taxidermic effigies regularly, however, in some situations there are a few vultures that refuse to leave the area. When this occurs WS will shoot one of these vultures to reinforce the harassment.
- Bird damage management at many airports in PA for human health and safety and property damage. When birds are flying around the airfield it would be appropriate to use lethal methods first because of the speed in which these situations need to be rectified and because of concerns that even careful professional use of frightening devices may

cause the bird(s) to move to an area that increased or continues the risk of aircraft collision.

**22. Objects to characterization of non-lethal capture methods that will result in euthanasia of the captured bird as "non-lethal" methods.**

The EA in Section 3.2.4.1 clearly states that birds caught in live-traps may be relocated or euthanized. In Appendix B the EA also discusses that birds captured in live traps may be relocated or euthanized and also discusses some of the difficulties associated with relocating birds. WS feels it would be inaccurate to describe these capture devices as lethal techniques because they can and will be used on occasion to relocate the problem bird(s). Furthermore, use of a live capture method also allows for the release of nontarget animals. To depict these methods as lethal techniques would create the false impression that relocation of problem birds and release of nontarget animals was not possible.

**23. Data on double-crested cormorant impacts on fisheries indicate that impacts are localized. There is no real proof that double-crested cormorants (DCCOs) could adversely impact fisheries. EA does not provide specific information on the impacts of bird predation on fish populations or recreational or commercial fishing. EA lacks information on where double-crested cormorants or herons would be controlled to protect fish populations.**

There are no projects for the protection of free-swimming fish populations from DCCO damage in Pennsylvania at this time. As discussed in the EA (Section 1.3.5) and the USFWS Final Environmental Impact Statement on double-crested cormorant management (USFWS 2003), the impact of cormorants on a particular fish species at a given site is dependent upon a number of factors including but not limited to the depth of the water, the number of cormorants present, and the availability of other types of fish that the cormorants can use for food (USFWS 2003). The USFWS (2003) provides a discussion of the impact of DCCOs on free-swimming fish. Rudstam et al. (2004) suggests that in some cases DCCOs may have detrimental effects on game fish populations. Rudstam et al. (2004) concluded that increased mortality of juvenile yellow perch and walleye on Lake Oneida was attributable to DCCOs and that this higher mortality would result in lower angler catch/harvest. Current data from the Minnesota Department of Natural Resources indicate that cormorants may be a factor in the decline of yellow perch and walleye populations on Leech Lake (USDA 2005*b*). There are several ongoing studies designed to assess the impacts of DCCOs on fish populations and the effectiveness of cormorant damage management efforts. WS will adjust its actions and amend the EA as necessary depending upon the available data. Research findings on this issue will be reviewed during WS annual monitoring for this EA. WS would not initiate a program to manage DCCO impacts on fish populations unless the PGC and/or the USFWS determines that there is sufficient data to believe that a negative impact is occurring. WS would not remove herons for the protection of fish populations.

**24. EA should consider the impact of non-consumptive wildlife uses on the local economy.**

WS agrees with commetor that non-consumptive uses of wildlife can have an important beneficial impact on local economies (Caudill, J. and E. Henderson. 2003, Pullis La Rouche, G. 2003). However, none of the alternatives is anticipated to significantly impact Pennsylvania bird populations, so there should be no adverse impacts the ability of people to engage in non-consumptive activities or associated economic benefits.

**25. Non-lethal techniques are adequate to resolve problems at aquaculture facilities.**

WS agrees that non-lethal techniques may be effective in resolving conflicts at some aquaculture facilities. The EA at section 1.3.5 states, "Under the preferred alternative (BDM), PA WS would encourage or recommend, where appropriate, aquaculture facilities to install exclusionary fencing or netting before attempting lethal control measures."

**27. EA is inconsistent regarding impacts on water quality. In Section 4.0 is says that WS' actions will not affect water quality, but contamination of water from bird activities is described as one of the needs for action. If the proposed action will have an impact on water quality then this factor must be analyzed.**

Birds may have a negative impact on water quality at localized sites (1.3.1). BDM techniques can be used to reduce these negative impacts. Impacts of birds on water quality are a human health and safety issue as defined in this EA. The impacts of the BDM alternatives on risks to human health and safety are addressed in EA Section 4.1.3.3, "Effects on human health and safety from Birds".

**28. The EA erroneously attributes risk of human exposure to West Nile Virus to birds not mosquitoes. Bird removal is not an appropriate solution to West Nile Virus problems.**

This statement was not made in the EA. Section 2.2.1 states, "West Nile virus is typically transmitted between birds and mosquitoes. Mammals can become infected if bitten by an infected mosquito, but individuals in most species of mammals do not become ill from the virus. The most serious manifestation of the WN [West Nile] virus is fatal encephalitis in humans, horses, and birds."

**29. Description of death by DRC-1339 as relatively painless is inaccurate.**

The statement was made relative to a statement made in the published literature on DRC-1339 which states that the birds die a quiet and apparently painless death (Shafer et al. 1966, 1983). WS agrees that a quiet death does not necessarily equate to a painless death.

## APPENDIX B

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